

IN THE CLAIMS:

Please amend the claims as follows:

1. (Previously Presented) A method of matching the response of a hydrophone and the response of an accelerometer, the method comprising the steps of:

performing a calculus operation upon the response of at least one of the hydrophone and the accelerometer; and

deriving a filter from the output of the calculus operation and the response of the other of the hydrophone and the accelerometer by dividing a result of the calculus operation by the response of the other of the hydrophone and the accelerometer.

2-3. (Cancelled)

4. (Currently Amended) A method as claimed in claim 1[[, 2 or 3]] wherein the step of performing the calculus operation comprises the step of integrating the response of the accelerometer with respect to time.

5. (Currently Amended) A method as claimed in claim 1[[, 2 or 3]] wherein the step of performing the calculus operation comprises the step of differentiating the response of the hydrophone with respect to time.

6. (Previously Presented) A method as claimed in claim 1 further comprising:
obtaining first seismic data using the one of the hydrophone and the accelerometer and obtaining second seismic data using the other of the hydrophone and the accelerometer; and

using the filter to match the first seismic data and the second seismic data.

7. (Currently Amended) A method as claimed in claim 1 further comprising:
synthesising synthesizing first seismic data for the one of the hydrophone and the accelerometer and synthesising second seismic data for the other of the hydrophone and the accelerometer; and

using the filter to match the first seismic data to the second seismic data.

8. (Previously Presented) A method as claimed in claim 6 or 7 and further comprising:

applying the calculus operation to the first seismic data; and

wherein the step of using the filter to match the first seismic data to the second seismic data comprises applying the filter to the first seismic data after the calculus operation has been applied to the first seismic data.

9. (Previously Presented) A method as claimed in claim 6 and further comprising: combining the matched first seismic data and the second seismic data.

10. (Original) A method as claimed in claim 9 and comprising the further step of applying one or more data processing steps to the combined seismic data.

11. (Previously Presented) An apparatus for matching the response of a hydrophone and the response of an accelerometer, the apparatus comprising:

means for performing a calculus operation upon the response of at least one of the hydrophone and the accelerometer; and

means for deriving a filter from the output of the calculus operation and the response of the other of the hydrophone and the accelerometer by dividing a result of the calculus operation by the response of the other of the hydrophone and the accelerometer.

12. (Previously Presented) An apparatus as claimed in claim 11 and further comprising:

means for receiving first seismic data acquired using the one of a hydrophone and an accelerometer and second seismic data acquired using the other of the hydrophone and the accelerometer; and

means for matching the first seismic data and the second seismic data using the filter.

13. (Previously Presented) An apparatus as claimed in claim 12 and further comprising: means for applying the calculus operation to the first seismic data; and means for subsequently applying the filter to the first seismic data.

14. (Previously Presented) An apparatus as claimed in claim 12 and further comprising means for combining the first seismic data and the second seismic data.

15. (Previously Presented) An apparatus as claimed in claim 12 comprising a programmable data processor.

16-18. (Cancelled)

19. (Previously Presented) A storage medium containing a program configured to:

perform a calculus operation upon the response of at least one of a hydrophone and an accelerometer; and

derive a filter from the output of the calculus operation and the response of the other of the hydrophone and the accelerometer by dividing a result of the calculus operation by the response of the other of the hydrophone and the accelerometer.

20. (Previously Presented) The storage medium of claim 19, wherein the program configured to perform the calculus operation is further configured to integrate the response of the accelerometer with respect to time.

21. (Previously Presented) The storage medium of claim 19 wherein the program configured to perform the calculus operation is further configured to differentiate the response of the hydrophone with respect to time.

22. (Previously Presented) The storage medium of claim 19, wherein the program is further configured to:

obtain first seismic data using the one of the hydrophone and the accelerometer;
obtain second seismic data using the other of the hydrophone and the accelerometer; and
use the filter to match the first seismic data and the second seismic data.

23. (Previously Presented) The storage medium of claim 19, wherein the program is further configured to:

synthesize first seismic data for the one of the hydrophone and the accelerometer;

synthesize second seismic data for the other of the hydrophone and the accelerometer; and

use the filter to match the first seismic data to the second seismic data.

24. (Previously Presented) The storage medium of claim 22, wherein the program is further configured to:

apply the calculus operation to the first seismic data; and

wherein the program configured to use the filter to match the first seismic data to the second seismic data is further configured to apply the filter to the first seismic data after the calculus operation has been applied to the first seismic data.